

morphonuclear. No organisms found in smears. Examination of the eyes on May 23rd, 1918, showed the veins engorged; otherwise normal. Lumbar puncture on same date showed slight increase of pressure and turbidity; temperature was lower, and the patient felt somewhat better. On May 24th, 1918, he still complained of headache, there was slight retraction of the neck, and Koenig's sign was doubtful. Temperature was normal; lumbar puncture revealed clear fluid under no pressure. The culture of the original spinal fluid showed a very slight growth, which on agglutination was determined to be meningococcus, Type 3. Patient made an uninterrupted recovery from the meningitis, although the arthritic symptoms and the erythema persisted for many weeks. Repeated cultures from the naso-pharynx, both during the acute stage and the convalescence of the meningitis failed to show any meningococci.

After recovery from the meningitis the following additional history was obtained from the patient: Left Australia on November 23rd, 1916, and on the transport three cases of meningitis developed, with two deaths. As far as he knows he did not come into contact with these cases. On December 26th, 1917, patient spent leave with his brother, a close associate of whom died of meningitis about this date.

This case of was particular interest in that epidemic cerebrospinal meningitis developed in a patient already suffering from a febrile illness accompanied by a pronounced rash.

AN UNUSUAL PSYCHONEUROSIS OF WAR: FUNCTIONAL LOSS OF THE SENSE OF SMELL

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THE following case of the complete loss of the sense of smell as a functional condition has recently been observed in the medical wards of the Granville Canadian Special Hospital, Buxton.

Cases of aphonia, deafness, amaurosis, amblyopia, anæsthesia, paresis, hemiplegia, paraplegia, etc., appearing as different psychoneuroses of war are frequently encountered, I have not as

yet seen a case reported in any of the literature of the functional loss of the sense of smell.

To physiologists this anosmia is interesting, because it demonstrates very clearly the four primary tastes. Thus a man with the loss of the sense of smell can only recognize things as acid, salt, bitter, or sweet. He is quite incapable of recognizing any of his food—in fact, has lost that fine differentiation with which *taste*, and not *smell*, has usually been credited.

718108 Pte. P., 15th C.B., arrived in France September, 1916. Carried on without any trouble until buried by high explosive shell on April 27th, 1917. He was unconscious for three hours, and recovered as they were digging him out. He was sent to the Casualty Clearing Station by the M.O., after having requested to be allowed to "carry on", because he was told he was "shaky". At the base hospital on April 30th, 1917, he noticed that he could not smell anything, and his meals tasted as if he were eating so much "pine wood". May 15th, 1917, he was sent back to his unit, but his M.O. would not allow him to "carry on" at the kitchens. Here he went out one morning with two other men to bury some decayed meat. While digging the pit they uncovered two dead Germans. The others left because of the offensive smell, but he was able to stick it out and finish the job without any discomfort.

He was sent again to the Casualty Clearing Station, June, 1917, diagnosed trench fever. While at hospital this time he developed gross symptoms of shell shock, such as tremor and persistent occipital headaches.

He was admitted to the Granville Canadian Hospital on July 30, 1918, complaining of headaches, tremor, and pain in the back.

Examination at this hospital showed a well-developed, well-nourished man; heart and lungs normal; reflexes equal and active; abdomen normal; gait and station normal; eyes normal. There was marked limitation of flexion of the back, and also a fine tremor which was confined to the right leg. X-ray examination of the back showed no abnormality. Wassermann negative.

EXAMINATION OF THE NOSE AND THROAT

Anterior nares, left: Septum markedly deviated to this side; lower turbinate enlarged.

Anterior nares, right: Normal.

Throat and posterior nares: normal.

EXAMINATION OF THE SPECIAL SENSES OF TASTE AND SMELL

The examination was carried out with the eyes bandaged. He was given the following to taste:

- (a) Sodium chloride, which he recognized as salt.
- (b) Syrup glucose, which he recognized as sweet.
- (c) HCl dil., which he recognized as acid.
- (d) Syrup quassia, which he recognized as bitter.

A number of volatile substances were given to smell, such as ammonium fortis, ether, oil lemon, hydrogen sulphide, aqua rosæ, oil men. pip., none of which he recognized.

Also a selection of different articles of foods were given to taste, such as cheese, butter, cabbage, potato, beef, jam, mutton, none of which he recognized.

METHOD OF TREATMENT

August 17th, 1918.—A weak faradic current was applied to the muscles of the lumbar region. Practically full voluntary flexion was restored in two minutes.

August 19th, 1918.—A considerable time was spent with the patient explaining his condition to him and assuring him that his sense of smell would be restored.

A strong faradic current was applied to the back of the neck, and at the same time ammonium fortis was held under his nose, and he was instructed to tell what it was. At the end of one minute he recognized it as "ammonia", and was highly pleased with himself. He next recognized oil of lemon with the aid of a weaker current.

The substances as used in the testing of his sense of smell were given again to the patient that he might identify them without the aid of the current. He identified each substance immediately.

The foods, as given in testing his sense of taste, were given again to the patient that he might identify them without the aid of the current. He identified each food immediately. The different foods were administered in combination, and the patient was able to tell accurately what he had been given.